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argus™

e2v

Introduction

As a result of 30 years intensive design and research, e2v's specialist engineers continue to lead the way in providing the best in hand-held thermal imaging technology for the emergency and security services.

Argus thermal imaging cameras are invaluable tools for firefighters, enabling them to see through smoke, identify and rescue casualties, and locate hot spots or the seat and spread of a fire. They aid police and security forces in the apprehension of criminals, and help gather evidence, saving lives and property in the process. Argus cameras have many additional applications where temperatures require monitoring, such as preventative maintenance and condition monitoring of equipment. They can also provide vision where light is unavailable.

Argus cameras are available from e2v's global network of sales and support offices located in the UK, USA, France and Hong Kong, as well as a network of distributors and representatives covering other key territories around the world.

Our latest range of cameras are engineered to be small and lightweight, at under 3lbs, but extremely robust. The Argus4 and Argus SC ranges have a ruggedised Radel casing to ensure resistance to heat, water, and impact. Argus cameras have a 2-metre drop test certification. The cameras can also withstand driving spray and short-term immersion in water.

Argus cameras are extremely reliable. With a reliability figure of 99.9%*, we are confident that an Argus camera will not let you down when you need it most.

*Relates to standard failures within the warranty period, not attributed to customer damage or upgrades where applicable.

Our range

The Argus4 range of cameras has been specially designed for the world's firefighters.

The Argus4
Standard Argus4.

The Argus4 HR320
The HR320 has a high definition detector for a superior quality image.

The Argus4 LITE
Low cost solution.

The Argus SC range of cameras are designed for hand-held security and policing applications.

The Argus SC
Standard Argus SC.

The Argus SC 50
Available with optional 50 or 24 degree field of view lens and a high definition detector for a superior quality image.

About our cameras

Argus features

Camera standard accessories

Argus cameras come with the following standard accessories:

- Handle
- Soft carry case
- Side straps
- Two rechargeable battery packs
- Battery charger with mains plug (US, UK, Europe)
- Neck strap
- USB connection lead for PC laptop
- User manual
- End-user software.

The above accessories come as standard with Argus4 and Argus SC cameras unless stated otherwise. All Argus SC standard accessories come in black.

**Camera features and accessories vary depending on specification of camera.

Argus thermal cameras are available with the most advanced features in the market. These include:**

High resolution 320 x 240 detector
(Available in the Argus4 HR320, Argus SC 50 and Argus SC 24 Cameras)
Argus thermal cameras have by far the sharpest image of any handheld thermal imaging camera. The Argus4 HR320 and Argus SC use a high resolution, Amorphous Silicon (ASi) microbolometer detector for a sharper picture and superior performance.

High performance LCD screen
(Available in the Argus4 HR320, Argus SC 50 and Argus SC 24 Cameras)
Argus cameras display a high definition thermal image on their large colour LCD screen, clearly visible at all levels of ambient light.

Rugged and durable casing
Argus cameras are constructed from high quality Radel®, which has been chosen for its strength, resistance to heat, water and impact. Protection from shock is provided by a combination of rugged components, optimum mechanical design and protective bumpers.

SceneSave™ digital image capture
Argus cameras can capture and store up to 100 images. This feature allows the user to "photograph" the scene that is being viewed and then the image can then be used in reports for investigative purposes, documenting the spread of a fire, evidence or for evaluation of your procedures or training.

The captured image provides important information including the time and date, spot and ambient temperatures.
The captured image can be given a specific name.

Camera features

Dynamic Scene Colourisation (DSC)

The Argus4 and Argus SC provides the end user with a selection of colour palettes that colourise and helps to interpret the thermal image, these allow the user to pin-point the hottest parts of the scene. There are 13 different colour palettes on the Argus4 and 11 on the Argus SC.

For the Argus4, colour palettes are selectable by either the remote control or the supplied customer software. Colour palettes on the Argus SC are selectable using the on screen menu. Once set, the camera will always start up in the selected colour scheme.

The Argus4 provides the firefighter with two colourisation modes that provide an immediate indication of temperature. Colour is gradually introduced into an otherwise monochrome image when the scene temperature goes above 150°C saturating at 660°C. The user has a choice of either red or soft red, the latter introducing yellow at 150°C saturating at 400°C where red is then introduced saturating at 660°C.

Unlike other cameras, the relationship between the displayed colour and scene temperature is fixed and remains the same in all camera sensitivity modes.

SceneSave™ feature allows the user to download images and colour change pallet.

The Argus camera DSC colour palettes include:

Grey scale

Grey scale black hot

Heat finder red

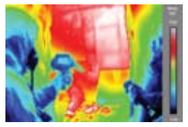
Heat finder red black hot

Heat finder soft red

Heat finder soft red black hot

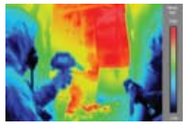
Heat marker

Heat marker soft red

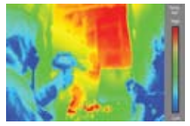


Full colour 1

Full colour 2



Full colour 3



Half colour

Green scale

Argus SC cameras include additional night seeker colour options

Tri-Mode Sensitivity

Temperature sensitivity modes are used to expand the dynamic temperature range of the thermal imaging cameras. Argus4 cameras are unique in having 3 modes, rather than the standard 2, which further increases the viewable temperature range up to 1000°C

The Argus4 camera automatically selects the most suitable mode for creating the clearest and most detailed image possible. The cameras mode change is seamless to the user, all colour schemes remain the same and without the loss of detail “whiteout”, which is common in other firefighting cameras.

High sensitivity
A green M on the camera’s LCD screen indicates that the Argus camera is in the high sensitivity mode. The LCD screen displays a clear and detailed image. The camera selects this mode when the temperature of objects in the camera field of view is between -40°C and +150°C.

Low sensitivity
An orange M on the camera’s LCD screen indicates that the Argus camera is in the low sensitivity mode. The LCD screen displays an image that is slightly less detailed than that when the camera is in the high sensitivity mode. The camera selects this mode when a significant area of the scene has an average temperature above +150°C but below +400°C.

Extra low sensitivity
A red M on the camera’s LCD screen indicates that the Argus camera is in the extra low sensitivity mode. The camera selects this mode when a significant area of the scene has an average temperature above +400°C. This enables the viewing of very high temperatures of up to 1000°C (800°C for the Argus4 and Argus4 Lite).

Camera features cont.

Customisable start-up screen

Argus cameras have the unique feature of a customisable start-up screen. This allows brigade, station or company logos or names to be added to the start-up screen for asset tracking and/or personalisation of the camera.

Direct spot temperature measurement

To help you determine the temperature of objects within a defined area of the thermal scene, Argus cameras have Direct Temperature Measurement (DTM). The DTM temperature is displayed in the bottom right hand corner of the screen (see image below).

The DTM can be used by firefighter to check the temperatures of doors before entering a building or room, help in the location of dangerously hot items, for example gas cylinders and determine the spread of a fire inside the building. It can help police compare the normal temperature of a house compared to a property cultivating drugs.

Ambient temperature measurement

To aid the firefighter to understand the working environment, the Argus4 is fitted with ambient temperature measurement.

A sensor fitted to the front of the camera performs the ambient temperature measurement. This gives an indication of the temperature close to the firefighter and is displayed in the bottom left hand corner. See image.

This temperature can be displayed in either degrees centigrade or Fahrenheit, selectable by the use of the customer software or the remote control.

Dimmable LCD display

The LCD backlight on the Argus SC can be switched off during covert surveillance to prevent recognition.

Time and date

The time and date is displayed at the top of the viewing screen.

ON screen set-up menu

Using buttons on the camera the Argus SC allows the end user to adjust camera settings, review and delete stored images. The camera setting on an Argus4 can only be selected via a remote control, this is a safety feature to ensure a firefighter cannot accidently adjust settings during an emergency situation.

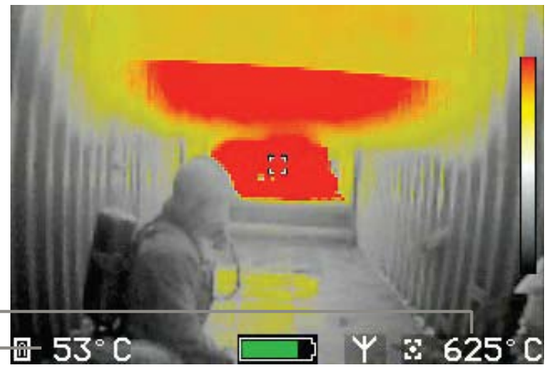
Zoom

Argus cameras are equipped with a x2 zoom as standard, with some models featuring a x 4 zoom.

Normal view

x 2 view

x 4 view



Direct spot temperature measurement

Ambient temperature measurement

Additional features

- 5 second start up time
- 1.3kg without battery, 1.5kg with battery
- Battery charge time of 2 hours
- Battery life of 4 hours minimum
- Removable handle and adjustable
- Nomex straps
- Onscreen graphics
  - Battery life indicator
  - Ambient temperature
  - Spot temperature
  - Time and date

Applications for Argus Cameras

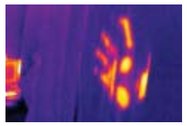
An Argus camera is an essential part of a fire fighters kit, in;

- Assessing the fire scene
- Search and rescue
- Capturing vital forensic detail before it is destroyed
- Identifying the source and spread of fire
- Detecting hidden fires in cavity walls, floor and ceiling voids
- Training and assessing fire fighting techniques
- Navigating through smoke-filled areas
- Fire prevention surveys
- Examining containers storing hazardous or flammable materials

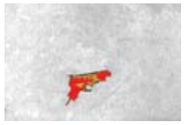
The house image on the Argus SC LCD screen is real. It shows heat being emitted from a loft where cannabis is being grown.

An Argus camera is an essential part of a law enforcer's kit, in;

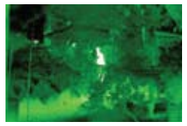
- Fugitive search
- Officer safety
- Border surveillance
- Search and rescue
- Drug interdiction operations
- Covert surveillance operations
- Collecting evidence
- Routine patrols
- Training and assessing
- Collision investigation
- Marine patrol
- Detect hidden compartments
- Finding buried objects
- Assists forensic evidence gathering
- Occupancy evaluation.



Forensic assistance



Collecting evidence



Fugitive search

Warranty and support

- 24 month warranty as standard
- Warranty can be extended by 3 years at the time of purchase
- A wide range of parts is available to support end-users. These include external components such as bumpers, handle, neck strap and battery accessories
- For a full listing contact your local distributor
- e2v has repair/service centres worldwide

Standards

he camera is sealed to IP67.

All parts within the camera are ROHS compliant with EU directive 2002/95/EC

RFI/EMC Compatibility – BS EN 61000-6-3-2001, BS EN 61000-6-1:2001, FCC CFR-47 Part 15

Safety to IEC 60950-1 and related national standards

Vibration/shock to BS EN 60721-3-2 Class 2M3

Optional camera accessories

Argus camera have a complementary range of accessories. These are:

- Truck Storage Mount and Battery Charger
- Transmitter Battery Pack
- Receiver Station and Kit
- External Power and Video Adaptor
- Hard Carry Case
- Mounting Bracket
- Retractable Lanyard

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